Please replace the paragraph at page 9 line 31 to page 10 line 5 with:

E2

--In the disclosed embodiment, Taq DNA polymerase is preferred although this is not an essential aspect of the invention. Taq polymerase, a thermostable polymerase, is active at high temperatures. Methods for the preparation of Taq are disclosed in U.S. Patent No. 4,889,818 and incorporated herein by reference. Taq polymerase is available from Perkin Elmer Cetus Instruments (PECI). However, other thermostable DNA polymerases isolated from other Thermus species or non Thermus species(e.g., Thermus thermophilus or Thermotoga maritima), as well as non-thermostable DNA polymerases such as T4 DNA polymerase, T7 DNA polymerase, E. coli DNA polymerase I, or the Klenow fragment of E. coli, can also be used in PCR. Methods for providing thermostable DNA polymerases are provided in copending Serial Nos. 455,967, filed December 22, 1989 (now U.S. Patent No. 5,618,711); 567,244, filed August 13, 1990 (now U.S. Patent No. 5,374,553); and 590,213, 590,466 (now U.S. Patent No. 5,455,170), and 590,490, filed September 28, 1990, which are all incorporated herein by reference.--

Please replace the paragraph at page 13 lines 8-16 with:

E3

--Methods for reverse transcribing RNA into cDNA are well known and described in Maniatis et al., supra. Alteratively, preferred methods for reverse transcription utilize thermoactive DNA polymerases. These methods are described in commonly assigned, copending, U.S. Serial No. 455,611, filed December 22, 1989 (now U.S. Patent No. 5,322,770), and incorporated herein by reference. U.S. Serial No. 455,611 describes a procedure for coupled reverse transcription/amplification of an RNA template using a thermostable DNA polymerase. The present specification teaches that intercalating agents do not prevent DNA polymerase activity. Consequently, the present method provides a homogeneous detection assay for RNA targets as well as DNA targets.--

Please replace the paragraph at page 15 lines 14-25 with:

E4

--In another embodiment of the invention, following amplification, the size of the amplified product is determined without the use of a probe or size fractionation methods such as HPLC or gel electrophoresis. Copending U.S. Serial No. 601,840, filed October 23, 1990 (now U.S. Patent No. 5,269,937), which is incorporated herein by reference, describes a method for determining the average molecular weight of a PCR product using light scattering. The method is suitable for use in conjunction with the present invention especially when the homogeneous assay result is detected using a spectra fluorometer. A fluorometer reads emissions at the fluorescence wavelength, according to the present invention, and measures light scattering, for example, at a 180° angle. This aspect of the invention is particularly useful for determining if amplification has occurred and simultaneously distinguishing the amplified target product from, for example, primer-dimer and high molecular weight DNA.--

Please replace the paragraph at page 17 lines 7-14 with:

E5

--In general, it is preferred but not essential that the DNA polymerase is added to the PCR reaction mixture after both the primer and template are added. Alterative1y, for example, the enzyme and primer are added last or the PCR buffer or template plus buffer are added last. It is generally desirable that at least one component that is essential for polymerization not be present until such time as the primer and template are both present, and the enzyme can bind to and extend the desired primer/template substrate (see U.S. patent application Serial No. 481,501, filed February 16, 1990, now U.S. Patent No. 5,411,876, which is incorporated herein by reference).--

Please replace the paragraph at page 18 lines 31-37 with:

E6

--Methods for quantitating nucleic acids are described in commonly assigned, copending U.S. Serial Nos. 254,889, filed October 7, 1988 (now U.S. Patent No. 5,389,512), and 413,623, filed September 28, 1989 (now U.S. Patent No. 5,219,727). These applications are incorporated herein by reference. These applications describe PCR-based methods using an internal standard to determine either the relative amount of a target or accurately quantitate the amount of target present prior to amplification, respectively. The present invention is suitable in conjunction with the methods described in the '889 and '623 applications.--

In the Claims

Please cancel claim 48 without prejudice.

REMARKS

Reconsideration of the application is respectfully requested. This Amendment is being submitted following an interview with the Examiner on January 5, 2001. The undersigned would like to thank the Examiner for his time and consideration in meeting with the undersigned and Timothy M. Woudenberg. Claim 48 has been canceled. Claims 30-47 are pending.

I. Amendments

The specification has been amended to identify U.S. patents that have issued from several applications cited in the present application. No new matter is added by any of the amendments.

II. Restriction Requirement

In part 3 of the Office action mailed February 27, 2001, claim 48 was withdrawn from consideration as being directed to a non-elected invention, which the Applicant understands to mean